

Claims

1. A device for actuating doors of vehicles, in particular aircraft, with a drive element (1) which interworks with a door locking mechanism,

characterized in that

a stroke movement of a shaft element (16) and subsequent rotation of a carrier element (10) are performed by means of a drive element (1) in an actuation device (5).

2. The device as claimed in claim 1, characterized in that the drive element (1) is designed as an electrically operated and controllable motor gearing unit (2).
3. The device as claimed in claim 1 or 2, characterized in that the actuation device (5) is connected to the drive element (1).
4. The device as claimed in claim 3, characterized in that the actuation device (5) is connected to the motor gearing unit (2).

5. The device as claimed in at least one of claims 1 to 4, characterized in that the actuation device (5) has a housing (6) which can be driven by means of the drive element (1) rotationally around a central axis (M).
6. The device as claimed in at least one of claims 1 to 5, characterized in that the housing (6) is designed as a cylinder element (7) with rotational symmetry around the central axis (M).
7. The device as claimed in at least one of claims 5 to 6, characterized in that an actuator element (15) with a shaft element (16) connected to its front surface is inserted within the housing (6).
8. The device as claimed in claim 7, characterized in that the actuator element (15) is designed with rotational symmetry around the central axis (M) and is mounted so that it can move axially and radially within the housing (6).
9. The device as claimed in claim 7 or 8, characterized in that the actuator element (15) has a multiplicity of guide links (18.1, 18.2) in its casing surface (17).

10. The device as claimed in claim 9, characterized in that at least one guide element (19.1, 19.2), which interworks with the guide links (18.1, 18.2) of the actuator element (15), is inserted into the housing (6), particular into the cylinder element (7).
11. The device as claimed in claim 9 or 10, characterized in that the respective guide links (18.1, 18.2) interconnect different planes (E_1 , E_2) in the casing surface (17).
12. The device as claimed in at least one of claims 1 to 11, characterized in that the carrier element (10), which is mounted to rotate around the central axis (M), is assigned to the drive element (1).
13. The device as claimed in at least one of claims 1 to 12, characterized in that the shaft element (16) engages with the carrier element (10) in an axially and rotationally decoupled manner.
14. The device as claimed in at least one of claims 6 to 13, characterized in that the carrier element (10) is mounted via at least one bearing (9) on its front surface in the cylinder element (7) so that it can rotate radially.

15. The device as claimed in claim 14, characterized in that the carrier element (10) axially projects beyond a front surface (8) of the cylinder element (7).
16. The device as claimed in at least one of claims 7 to 15, characterized in that coupling elements (12.1, 12.2) are assigned to the actuator element (15) and the carrier element (10) in each case on front surfaces (11.1, 11.2).
17. The device as claimed in claim 16, characterized in that the coupling elements (12.1, 12.2) of the carrier element (10) and the actuator element (15) are aligned radially in relation to one another.
18. The device as claimed in at least one of claims 1 to 17, characterized in that an axial guide (22) or axially movable splined shaft connections are provided between the actuation device (5) and the drive element (1), in particular between the actuation device (5) and the motor gearing unit (2).
19. The device as claimed in at least one of claims 7 to 18, characterized in that the actuator element (15) or the housing (6), in particular the cylinder element

(7), can be driven rotationally around the central axis (M) via the motor gearing unit (2).

20. The device as claimed in at least one of claims 16 to 19, characterized in that, through rotational driving of the actuator element (15) or the housing (6), in particular the cylinder element (7), the actuator element (15) can be moved through a stroke (H), guided by the link elements (19.1, 19.2) in the guide link (18.1, 18.2) against the carrier element (10), until the coupling elements (12.1, 12.2) of the carrier element (10) and the actuator element (15) meet with one another and the carrier element (10) can be rotated through further radial rotation of the actuator element (15) or the housing (6).